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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/586,876

07/21/2006

Yasuhito Masuda

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EXAMINER

VO, HAI

ART UNIT

PAPER NUMBER

1794

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DELIVERY MODE

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/586,876	<b>Applicant(s)</b> MASUDA ET AL.	
	<b>Examiner</b> Hai Vo	<b>Art Unit</b> 1794	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 26 February 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) 8-27 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 July 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>08/01/2007 and 07/21/2006</u> .                               | 6) <input type="checkbox"/> Other: _____                          |

***Election/Restrictions***

1. Applicant's election of Group I, claims 1-7 in the reply filed on 02/26/2008 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

***Priority***

2. Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Japan on January 23, 2004. It is noted, however, that applicant has not filed a certified copy of the JP 2004-016286 application as required by 35 U.S.C. 119(b).

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 2004-265844 in view of Adhi et al, "Femtosecond Ultraviolet (248 nm) excimer laser processing of Teflon (PTFE)," Applied Surface Science, vol 218, 2003. Matsuda et al (US 2006/0251871) will be relied on as a translation of JP 2004-265844. Matsuda teaches a porous expanded polytetrafluoroethylene (ePTFE) material having a thickness of 10 to 200 microns with pore size of 0.1 microns and porosity of 60% (paragraphs 49, example 1). The ePTFE comprises fibrils

and nodes connected to each other by the fibrils (paragraph 52). The ePTFE has microholes of about 15 microns in diameter (example 1). The microholes extend through the thickness of the material. Likewise, the microholes have a depth or a height ranging from 10 to 200 microns, which is within the claimed range. The microholes are formed by laser drilling. Matsuda discloses the ePTFE material have been supported by the PTFE films during ablation.

Matsuda does not specifically disclose the use of femtosecond lasers to perform ablation of ePTFE material. Adhi, however, teaches femtosecond lasers allowing the PTFE material to be ablated to be very high precision and without damaging surrounding areas as a result of heat influence (abstract). Adhi discloses the femtosecond laser having a pulse length of 380 fs. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the femtosecond lasers to make the microholes within the ePTFE of Matsuda motivated by the desire to provide the microholes within high precision and without damaging surrounding areas of the material as a result of heat influence. It appears that Matsuda as modified by Adhi used the same femtosecond lasers to perform ablation of the ePTFE material as Applicants, therefore, it is the examiner's position that the microstructure structure of the wall surface of the microhole would be substantially inherently retained without being destroyed.

6. Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kram et al (US 6,306,491) in view of Adhi et al, "Femtosecond Ultraviolet (248 nm)

excimer laser processing of Teflon (PTFE)," Applied Surface Science, vol 218, 2003. Kram teaches a porous expanded polytetrafluoroethylene (ePTFE) material having a thickness of 0.3 mm with pore sizes ranging from 0.5 to 10 microns (column 31, lines 35-55). The ePTFE comprises fibrils and nodes connected to each other by the fibrils. The ePTFE has microholes of about 200 microns in diameter. The microholes extend through the thickness of the material as shown in figure 16. Likewise, the microholes have a depth or a height of 300 microns, which is within the claimed range. The microholes are formed by laser drilling. Kram teaches the ePTFE made according with the teachings of Gore (US 3,953,566) which is incorporated herein by reference (column 31, lines 43-45). Gore is relied on as evidence to show a state of fact - that is, the ePTFE has a porosity of 67%. Kram does not specifically disclose the use of femtosecond lasers to perform ablation of ePTFE material. Adhi, however, teaches femtosecond lasers allowing the PTFE material to be ablated to be very high precision and without damaging surrounding areas as a result of heat influence (abstract). Adhi discloses the femtosecond laser having a pulse length of 380 fs. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the femtosecond lasers to make the microholes within the ePTFE of Kram motivated by the desire to provide the microholes within high precision and without damaging surrounding areas of the material as a result of heat influence. It appears that Kram as modified by Adhi used the same femtosecond lasers to perform ablation of the

ePTFE material as Applicants, therefore, it is the examiner's position that the microstructure structure of the wall surface of the microhole would be substantially inherently retained without being destroyed. Neither Kram nor Adhi teaches or suggest the use of the support during ablation; however, it is a product-by-process limitation not as yet shown to produce a patentably distinct article. It is the examiner's position that the article of Kram as modified by Adhi is identical to or only slightly different than the claimed article prepared by the method of the claim, because both articles are formed from the same materials, having structural similarity as discussed above. The ePTFE has a microstructure similar to that of the claimed ePTFE, i.e., the pore size, porosity within the claimed ranges. The microholes were made by ultrashort-pulse lasers. The microholes have a diameter, depth and height within the claimed ranges. Even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or an obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process. *In re Thorpe*, 227 USPQ 964, 966 (Fed. Cir. 1985). The burden has been shifted to the applicant to show unobvious differences between the claimed product and the prior art product. *In re Marosi*, 218 USPQ 289,291 (Fed. Cir. 1983). It is noted that if the applicant intends to rely on Examples in the specification or in a submitted Declaration to show non-obviousness, the

applicant should clearly state how the Examples of the present invention are commensurate in scope with the claims and how the Comparative Examples are commensurate in scope with Kram as modified by Adhi.

7. Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over White et al (US 6,409,764) in view of Adhi et al, "Femtosecond Ultraviolet (248 nm) excimer laser processing of Teflon (PTFE)," Applied Surface Science, vol 218, 2003. White teaches a porous expanded polytetrafluoroethylene (ePTFE) material having a thickness of 0.005 to 0.01 inches with an average pore size of 1.7 microns (column 20, lines 15-25). The ePTFE comprises fibrils and nodes connected to each other by the fibrils (column 20, lines 20-25). The ePTFE has microholes of about 300 microns in diameter (column 20, lines 50-60). The microholes extend through the thickness of the material as shown in figure 6. Likewise, the microholes have a depth or a height from 0.005 to 0.01 inches, which is within the claimed range. The microholes are formed by laser drilling. White teaches the ePTFE made according with the teachings of Gore (US 3,953,566) which is incorporated herein by reference (column 14, lines 55-60). Gore is relied on as evidence to show a state of fact - that is, the ePTFE has a porosity of 67%. White does not specifically disclose the use of femtosecond lasers to perform ablation of ePTFE material. Adhi, however, teaches femtosecond lasers allowing the PTFE material to be ablated to be very high precision and without damaging surrounding areas as a result of heat influence (abstract). Adhi discloses the femtosecond laser having a pulse length of 380 fs.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the femtosecond lasers to make the microholes within the ePTFE of White motivated by the desire to provide the microholes within high precision and without damaging surrounding areas of the material as a result of heat influence. It appears that White as modified by Adhi used the same femtosecond lasers to perform ablation of the ePTFE material as Applicants, therefore, it is the examiner's position that the microstructure structure of the wall surface of the microhole would be substantially inherently retained without being destroyed.

Neither White nor Adhi teaches or suggest the use of the support during ablation; however, it is a product-by-process limitation not as yet shown to produce a patentably distinct article. It is the examiner's position that the article of White as modified by Weber is identical to or only slightly different than the claimed article prepared by the method of the claim, because both articles are formed from the same materials, having structural similarity as discussed above. The ePTFE has a microstructure similar to that of the claimed ePTFE, i.e., the pore size, porosity within the claimed ranges. The microholes were made by ultrashort-pulse lasers. The microholes have a diameter, depth and height within the claimed ranges. Even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or an obvious from



a product of the prior art, the claim is unpatentable even though the prior product was made by a different process. *In re Thorpe*, 227 USPQ 964, 966 (Fed. Cir. 1985). The burden has been shifted to the applicant to show unobvious differences between the claimed product and the prior art product. *In re Marosi*, 218 USPQ 289,291 (Fed. Cir. 1983). It is noted that if the applicant intends to rely on Examples in the specification or in a submitted Declaration to show non-obviousness, the applicant should clearly state how the Examples of the present invention are commensurate in scope with the claims and how the Comparative Examples are commensurate in scope with White as modified by Adhi.

### ***Double Patenting***

8. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

9. Claims 1-7 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-21 of copending Application No. 10/551,459 in view of Adhi et al, "Femtosecond Ultraviolet (248 nm) excimer laser processing of Teflon (PTFE)," Applied Surface Science, vol 218, 2003. See obviousness rationale set forth in the paragraph no. 5 above.

This is a provisional obviousness-type double patenting rejection.

### **Conclusion**

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Web (US 6,517,888) discloses a method for making a medical device having a coated portion by laser ablation.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hai Vo whose telephone number is (571) 272-1485. The examiner can normally be reached on Monday through Thursday, from 9:00 to 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached on (571) 272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1794

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Hai Vo/  
Hai Vo  
Primary Examiner, Art Unit 1794